

IN THE CLAIMS:

1. (Currently Amended) In combination:
  - a) a first connecting assembly comprising:

a port having a central axis, a radially outwardly facing surface, a first free end, and a second end spaced axially from the first free end,

the port having threads on the radially outwardly facing surface; and

an axially facing surface; and
  - b) a second connecting assembly for operatively connecting a cable to the port on the first connecting assembly, the second connecting assembly comprising:

a tubular fitting having a central axis and axially spaced first and second ends,

the tubular fitting defining a receptacle for a cable at the first end of the tubular fitting,

the tubular fitting further comprising a threaded element with threads which can be engaged with the threads on the port to maintain the first and second connecting assemblies operatively engaged and thereby a cable in the receptacle in the tubular fitting operatively connected to the port; and

a sealing assembly,

the first and second connecting assemblies operatively engageable by i) relatively situating the first and second connecting assemblies in a pre-assembly state wherein the first and second connecting assemblies are separated from each other; ii) relatively moving the first and second connecting assemblies from the pre-assembly state to engage the threads on the port and threaded element; and iii) rotating at least one of the port and threaded element relative to the other of the port and threaded element to cause the

threads on the port and threaded element to interact and thereby cause the threaded element to move axially relative to the port in a first direction from the first free end towards the second end of the port into a secured position,

the sealing assembly comprising a first sealing surface that abuts to the axially facing surface on the first connecting assembly with the threaded element in the secured position,

the sealing assembly comprising a sealing portion with a second sealing surface,  
the sealing portion having a first state and a deformed state,

wherein the sealing portion is caused to be changed from the first state into the deformed state and the second sealing surface is caused to thereby be moved sealingly radially inwardly against the radially outwardly facing surface on the port as an incident of the threaded element moving in the first axial direction with the first sealing surface abutted to the axially facing surface of the first connecting assembly,

wherein the sealing assembly and tubular fitting are maintained together as a unitary assembly with the second connecting assembly separated from the first connecting assembly,

the sealing assembly having a first axially facing shoulder and the tubular fitting having a third axially facing shoulder.

the first and third axially facing shoulders abutting to each other to prevent the sealing assembly and tubular fitting from being separated from each other by relative axial movement.

2. (Currently amended) The combination according to claim 1 wherein the sealing assembly defines ~~first and~~ a second shoulder facing axially oppositely facing ~~shoulders to the first shoulder~~, the tubular fitting defines ~~third and~~ a fourth shoulder facing axially oppositely facing ~~shoulders to the third shoulder~~, the first shoulder confronts the third shoulder to confine relative movement between the sealing assembly and tubular fitting in an axial direction towards each other and the second shoulder confronts the fourth shoulder to confine relative movement between the sealing assembly and tubular fitting in an axial direction away from each other.

3. (Original) The combination according to claim 1 wherein the tubular fitting comprises a radially outwardly opening annular groove and the sealing assembly comprises a radially inwardly projecting bead which extends into the annular groove.

4. (Original) The combination according to claim 1 wherein the sealing assembly is at the second end of the tubular fitting.

5. (Original) The combination according to claim 1 wherein the first and second sealing surfaces are both spaced axially fully from the threads on the threaded element.

6. (Original) The combination according to claim 4 wherein the first and second sealing surfaces are both spaced axially fully from the threads on the threaded element.

7. (Original) In combination:

a) a first connecting assembly comprising:

a port having a central axis, a radially outwardly facing surface, a first free end, and a second end spaced axially from the first free end,

the port having threads on the radially outwardly facing surface; and

an axially facing surface; and

b) a second connecting assembly for operatively connecting a cable to the port on the first connecting assembly, the second connecting assembly comprising:

a tubular fitting having a central axis and axially spaced first and second ends,

the tubular fitting defining a receptacle for a cable at the first end of the tubular fitting,

the tubular fitting further comprising a threaded element with threads which can be engaged with the threads on the port to maintain the first and second connecting assemblies operatively engaged and thereby a cable in the receptacle in the tubular fitting operatively connected to the port,

the threads on the threaded element bounding a first effective diameter; and

a sealing assembly,

the first and second connecting assemblies operatively engageable by i) relatively situating the first and second connecting assemblies in a pre-assembly state wherein the first and second connecting assemblies are separated from each other; ii) relatively moving the first and second connecting assemblies axially from the pre-assembly state to engage the threads on the port and threaded element; and iii) rotating at least one of the port and threaded element relative to the other of the port and threaded element to cause the threads on the port and threaded element to interact and thereby cause the threaded

element to move axially relative to the port in a first direction from the first free end towards the second end of the port into a secured position,

the sealing assembly comprising a first sealing surface that abuts to the axially facing surface on the first connecting assembly with the threaded element in the secured position,

the sealing assembly comprising a sealing portion with a second sealing surface,  
the sealing portion having a first state and a deformed state,

the second sealing surface having an inside effective diameter that is greater than the first effective diameter with the sealing portion in the first state,

wherein the sealing portion is caused to be changed from the first state into the deformed state and the second sealing surface is caused to thereby be moved sealingly radially inwardly against the radially outwardly facing surface on the port as an incident of the threaded element moving in the first axial direction with the first sealing surface abutted to the axially facing surface of the first connecting assembly.

8. (Original) The combination according to claim 7 wherein the second sealing surface has an unthreaded, continuous annular shape.

9. (Original) The combination according to claim 8 wherein the threads on the port have a second effective diameter and with the sealing portion in the first state, the inside effective diameter is greater than the second effective diameter.

10. (Original) The combination according to claim 7 wherein the tubular fitting has a first surface and the sealing assembly has a second surface and with the first sealing surface abutted to the axially facing surface of the first connecting assembly, continued movement of the threaded element in the first axial direction causes the first and second surfaces to interact to thereby change the sealing portion from the first state into the deformed state.

11. (Original) The combination according to claim 10 wherein at least one of the first and second surface, as viewed in cross section in a plane extending through the central axis of the tubular fitting, has a straight shape extending along a line that is not parallel to the central axis of the tubular fitting.

12. (Original) The combination according to claim 7 wherein the threaded element has a first cam surface and the sealing element has a second cam surface, and with the first sealing surface abutted to the axially facing surface of the first connecting assembly, continued movement of the threaded element in the first axial direction causes the first and second cam surfaces to interact so as to exert a radially inward force on the sealing portion as the sealing portion is changed from the first state into the deformed state.

13. (Original) The combination according to claim 10 wherein the sealing portion comprises an O-ring.

14. (Original) The combination according to claim 10 wherein the sealing assembly has a third surface and with the first sealing surface abutted to the axially facing surface of the first connecting assembly, continued movement of the threaded element in the first axial direction causes the sealing portion to be compressed between the first and third surfaces so as to expand radially inwardly to cause the second sealing surface to be moved radially inwardly sealingly against the radially outwardly facing surface on the port.

15. (Original) The combination according to claim 14 wherein the sealing assembly comprises a wall and the first sealing surface and third surface are defined by the wall and face axially oppositely to each other.

16. (Original) The combination according to claim 7 wherein the first and second sealing surfaces are defined by a single piece.

17. (Original) The combination according to claim 7 wherein the first and second sealing surfaces are defined by first and second separate discrete elements.

18. (Original) The combination according to claim 7 wherein the sealing assembly and tubular fitting are maintained together as a unitary assembly with the second connecting assembly separated from the first connecting assembly.

19. (Original) The combination according to claim 18 wherein the sealing assembly defines first and second axially oppositely facing shoulders, the tubular fitting

defines third and fourth axially oppositely facing shoulders, the first shoulder confronts the third shoulder to confine relative movement between the sealing assembly and tubular fitting in an axial direction towards each other and the second shoulder confronts the fourth shoulder to confine relative movement between the sealing assembly and tubular fitting in an axial direction away from each other.

20. (Original) The combination according to claim 7 wherein the tubular fitting comprises a radially outwardly opening annular groove and the sealing assembly comprises a radially inwardly projecting bead which extends into the annular groove.

21. (Currently Amended) In combination:

a) a first connecting assembly comprising:

a port having a central axis, a radially outwardly facing surface, a first free end, and a second end spaced axially from the first free end,

the port having threads on the radially outwardly facing surface; and

an axially facing surface; and

b) a second connecting assembly for operatively connecting a cable to the port on the first connecting assembly, the second connecting assembly comprising:

a tubular fitting having a central axis and axially spaced first and second ends,

the tubular fitting defining a receptacle for a cable at the first end of the tubular fitting,

the tubular fitting further comprising a threaded element with threads which can be engaged with the threads on the port to maintain the first and second connecting



assemblies operatively engaged and thereby a cable in the receptacle in the tubular fitting operatively connected to the port; and

a sealing assembly,

the first and second connecting assemblies operatively engageable by i) relatively situating the first and second connecting assemblies in a pre-assembly state wherein the first and second connecting assemblies are separated from each other; ii) relatively moving the first and second connecting assemblies axially from the pre-assembly state to engage the threads on the port and threaded element; and iii) relatively rotating at least one of the port and threaded element relative to the other of the port and threaded element to cause the threads on the port and threaded element to interact and thereby cause the threaded element to move axially relative to the port in a first direction from the first free end towards the second end of the port into a secured position,

the sealing assembly comprising a sealing portion with a first sealing surface,

the sealing portion having a first state and deformed state,

the tubular fitting having a first surface and the sealing assembly having a second surface,

at least one of the first and second surfaces angled relative to the central axis so that as the threaded element is moved in the first axial direction, the first and second surfaces cooperate to cause the first sealing surface to be wedged, through the at least one of the first and second surfaces that is angled, radially inwardly sealingly to against the radially outwardly facing surface on the port as the sealing portion is caused to be changed from the first state into the deformed state.

22. (Original) The combination according to claim 21 wherein the sealing portion comprises an O-ring.

23. (Original) The combination according to claim 21 wherein the sealing assembly comprises a second sealing surface which is abutable to the axially facing surface of the first connecting assembly.

24. (Original) The combination according to claim 23 wherein the first and second sealing surfaces are defined by a single piece.

25. (Original) The combination according to claim 23 wherein the first and second sealing surfaces are defined by first and second separate discrete elements.

26. (Original) The combination according to claim 21 wherein the sealing assembly and tubular fitting are maintained together as a unitary assembly with the second connecting assembly separated from the first connecting assembly.

27. (Currently Amended) In combination:

a) a first connecting assembly comprising:

a port having a central axis, a radially outwardly facing surface, a first free end, and a second free end spaced axially from the first free end,

the port having threads on the radially outwardly facing surface; and

an axially facing surface; and

b) a second connecting assembly for operatively connecting a cable to the port on the first connecting assembly, the second connecting assembly comprising:

a tubular fitting having a central axis and axially spaced first and second ends, the tubular fitting defining a receptacle for a cable at the first end of the tubular fitting,

the tubular fitting further comprising a threaded element with threads which can be engaged with the threads on the port to maintain the first and second connecting assemblies operatively engaged and thereby a cable in the receptacle in the tubular fitting operatively connected to the port; and

a sealing assembly,

the first and second connecting assemblies operatively engageable by i) relatively situating the first and second connecting assemblies in a pre-assembly state wherein the first and second connecting assemblies are separated from each other, ii) relatively moving the first and second connecting assemblies axially from the pre-assembly state to engage the threads on the port and threaded element; and iii) relatively rotating at least one of the port and threaded element relative to the other of the port and threaded element to cause the threads on the port and threaded element to interact and thereby cause the threaded element to move axially relative to the port in a first direction from the first free end towards the second end of the port into a secured position,

the sealing assembly comprising a first sealing surface that abuts to the axially facing surface on the first connecting assembly with the threaded element in the secured position,

the sealing assembly comprising a sealing portion with a second sealing surface,

the sealing portion having a first state and a deformed state,

wherein the sealing portion is caused to be changed from the first state into the deformed state and the second sealing surface is thereby caused to be moved radially inwardly by substantially deforming the sealing portion to thereby cause the second sealing surface to be moved into contact with and sealingly against the radially outwardly facing surface on the port as an incident of the threaded element moving in the first axial direction with the first sealing surface abutted to the axially facing surface of the first connecting assembly,

wherein the tubular fitting has a first surface and as the threaded element is moved in the first axial direction with the first sealing surface abutted to the axially facing surface of the first connecting assembly, the sealing portion of the sealing assembly is compressed between the first surface and the axially facing surface of the first connecting assembly so as to expand and thereby cause the second sealing surface to be moved radially inwardly sealingly against the radially outwardly facing surface on the port.

28. (Original) The combination according to claim 27 wherein the sealing assembly comprises a wall which is abutable to the axially facing surface of the first connecting assembly, the wall having a third surface facing oppositely to the axially facing surface of the first connecting assembly, and the sealing portion of the sealing assembly is compressed between the first and third surfaces as the second sealing surface is caused to be moved radially inwardly sealingly against the radially outwardly facing surface on the port.

29. (Original) The combination according to claim 27 wherein at least one of the first and second surfaces, as viewed in cross-section in a plane extending through the central axis of the tubular fitting, has a straight shape extending along a line that is not parallel to the central axis of the tubular fitting.

30. (Original) The combination according to claim 27 wherein the sealing portion comprises an O-ring.

31. (Original) The combination according to claim 27 wherein the first and second sealing surfaces are defined by a single piece.

32. (Original) The combination according to claim 27 wherein the first and second sealing surfaces are defined by first and second separate discrete elements.

33. (Original) The combination according to claim 27 wherein the sealing assembly and tubular fitting are maintained together as a unitary assembly with the second connecting assembly separated from the first connecting assembly.

34. (Currently amended) In combination:  
a) a first connecting assembly comprising:  
a port having a central axis, a radially outwardly facing surface, a first free end, and a second end spaced axially from the first free end,  
the port having threads on the radially outwardly facing surface; and

an axially facing surface; and

b) a second connecting assembly for operatively connecting a cable to the port on the first connecting assembly, the second connecting assembly comprising:

a tubular fitting having a central axis and axially spaced first and second ends, the tubular fitting defining a receptacle for a cable at the first end of the tubular fitting,

the tubular fitting further comprising a threaded element with threads which can be engaged with the threads on the port to maintain the first and second connecting assemblies operatively engaged and thereby a cable in the receptacle in the tubular fitting operatively connected to the port; and

a sealing assembly comprising a sealing portion,

there being means cooperating between the first and second connecting assemblies for causing the sealing portion to be deformed radially inwardly into contact with the radially outwardly facing surface and so as to sealingly engage the radially outwardly facing surface on the port and the sealing assembly to sealingly engage the axially facing surface on the first connecting assembly as an incident of the threaded element and port being relatively rotated to cause the threaded element to advance in a first axial direction from the first free end of the port towards the second end of the port.

35. (Currently amended) A method of operatively connecting a cable to a port, the method comprising the steps of:

providing a first connecting assembly comprising: a) a port with a central axis, a radially outwardly facing surface having threads thereon, a first free end, and a second end spaced axially from the first free end and b) an axially facing surface;

providing a second connecting assembly comprising a) tubular fitting with a central axis and axially spaced first and second ends and comprising a threaded element with threads and b) a sealing assembly having a sealing portion;

aligning the first and second connecting assemblies in a pre-assembly state with the first and second connecting assemblies separated from each other;

relatively axially moving the first and second connecting assemblies to engage the threads on the port and the tubular fitting;

rotating at least one of the port and threaded element relative to the other of the port and threaded element to cause the threads to interact and thereby cause the threaded element to move axially relative to the port in a first direction from the first free end towards the second free end; and

as an incident of moving the threaded element axially in the first direction, causing the sealing portion to be deformed radially inwardly into contact with the outwardly facing surface on the port to engage sealingly with the outwardly facing surface on the port.

36. (Original) The method of operatively connecting a cable to a port according to claim 35 further comprising the step of causing the sealing assembly to sealingly engage the axially facing surface on the first connecting assembly as an incident of moving the threaded element axially in the first direction.

37. (Currently amended) The method of operatively connecting a cable to a port according to claim 35 wherein the step of causing the sealing portion to be deformed radially inwardly comprises causing the sealing portion to be changed from a) a first state wherein [[a]] the entire sealing surface is spaced from the outwardly facing surface on the port into b) a deformed state wherein the sealing surface is pressed against the outwardly facing surface on the port.

38. (Original) The method of operatively connecting a cable to a port according to claim 35 wherein the step of causing the sealing portion to be deformed radially inwardly comprises producing a compressive axial force on the sealing portion to cause the sealing portion to be deformed radially inwardly.

39. (Original) The method of operatively connecting a cable to a port according to claim 35 wherein the step of causing the sealing portion to be deformed radially inwardly comprises producing an axial compressive force on the sealing portion between the second connecting assembly and a part of the sealing assembly.

40. (Original) The method of operatively connecting a cable to a port according to claim 35 wherein the step of providing a second connecting assembly comprises providing a tubular fitting and sealing assembly that are maintained together as a unitary assembly with the second connecting assembly separated from the first connecting assembly.



41. (Previously Presented) A cable connecting assembly for connection to a port, the cable connecting assembly comprising:

a sealing assembly; and

a tubular fitting for receiving a cable and having a central axis,

the sealing assembly comprising a first sealing surface facing axially relative to the central axis and a second sealing surface facing radially relative to the central axis, each to sealingly engage a port to which the cable connecting assembly is connected,

the tubular fitting comprising a cylindrical body with internal threads to engage a port to which the cable connecting assembly is connected and a surface facing radially outwardly relative to the central axis,

the cylindrical body and sealing assembly having a cooperating groove and bead, one each on the radially outwardly facing surface of the cylindrical body and the sealing assembly, to maintain the sealing assembly and the tubular fitting together as a unitary assembly preparatory to connecting the cable connecting assembly to a port.

42. (Previously Presented) The cable connecting assembly according to claim 41 in combination with a port with external threads that engage the internal threads and wherein as the internal and external threads are engaged, the second sealing surface is urged with a progressively increasing sealing force against the port.

43. (Previously Presented) The cable connecting assembly according to claim 41 wherein there are two cooperating pairs of shoulders that abut to limit opposite relative axial movement between the cylindrical body and sealing assembly.

44. (Previously Presented) A sealing assembly for use with a coaxial connector for connection to a port having a central axis, the sealing assembly comprising:

a cylindrical body at one end of the coaxial connection,

the cylindrical body having an internal surface, at least a portion of which is threaded, and an external surface,

a groove and bead, provided one each on the sealing assembly and external surface of the cylindrical body,

the bead extending into the groove with the sealing assembly and cylindrical body in a pre-assembled state wherein the sealing assembly and cylindrical body are maintained together as a unitary assembly,

the sealing assembly having a first port sealing surface facing axially relative to the central axis and a second port sealing surface facing radially relative to the central axis.

45. (Previously Presented) The cable connecting assembly according to claim 44 wherein there are two cooperating pairs of shoulders that abut to limit opposite relative axial movement between the cylindrical body and sealing assembly.

46. (Previously Presented) The cable connecting assembly according to claim 44 wherein the cylindrical body is configured to accommodate a conventional wrench to facilitate turning of the cylindrical body around the central axis.

47. (Previously Presented) The cable connecting assembly according to claim 46 wherein the external surface of the cylindrical body comprises at least two flat surfaces that can be engaged by a conventional wrench.

48. (Previously Presented) The cable connecting assembly according to claim 44 in combination with a port with external threads that engage the internal threads and wherein as the internal and external threads are engaged, the second sealing surface is urged with a progressively increasing sealing force against the port.